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Science Policy Note SPN2017-01

Guidance for Implementation of Revisions to Residue Chemistry Crop Groups 4 and 5

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1.0 Purpose

This Science Policy Note serves to provide guidance to stakeholders with respect to revisions that were made to the Pest Management Regulatory Agency's (PMRA) Residue Chemistry Crop Groups 4 (Leafy Vegetables, except Brassica Vegetables) and 5 (Brassica (Cole) Leafy Vegetables) under DIR2014-02.

2.0 Background

Crop groups enable the registration, expansion and establishment of MRLs for groups of similar crops based on residue data from certain representative commodities. The crop grouping concept leads to an estimate of the maximum residue level that could occur on any crop within the group. The crop groups listed in Regulatory Directive DIR98-02 were based on revisions made in 1995.

The International Crop Grouping Consulting Committee (ICGCC) was established to a) update the crop groups to incorporate more than 500 "orphan crops" that were not members of an existing crop group, and b) develop new crop groups to more easily harmonize crop groups and simplify the commodity terminology for establishing MRLs.

In co-operation with the United States Environmental Protection Agency and the ICGCC, the PMRA is revising and updating the 20 crop groups as listed in Section 15 of Regulatory Directive DIR98-02, *Residue Chemistry Guidelines*. The PMRA expects these revisions to promote more extensive use of crop groupings for MRL setting purposes and, in particular, facilitate the availability of pesticides for minor crop uses.

To date, the PMRA has approved revisions to ten of the existing crop groups under DIR2009-01, DIR2010-01, DIR2011-02, and DIR2014-02. In addition, four new crop groups have been created.

3.0 Revisions to Crop Groups 4 and 5

Crop Groups 4 (Leafy Vegetables, except Brassica vegetables) and 5 (Brassica (Cole) Leafy Vegetables) were revised in October 2014, under DIR2014-02. In addition, a new Crop Group 22 (Stalk, Stem, and Leaf Petioles) was established under this directive.

Although the PMRA has approved revisions to other existing crop groups, the revisions made to Crop Groups 4 and 5 represent the first time that significant crop group restructuring and transfer of individual crops resulting in new representative commodities have taken place. Crop Groups 4 and 5 were significantly restructured to create new Crop Groups 4-13, 5-13, and 22.

Crop Group 4-13 includes most of the same commodities as Crop Subgroups 4A and 5B and has the same representative commodities (*i.e.* head and leaf lettuce, spinach, and mustard greens). **Crop Group 5-13** includes most of the same commodities as Crop Subgroup 5A and has the same representative commodities (*i.e.* cabbage, broccoli or cauliflower). Most of the crops from Crop Subgroup 4B have been moved into the new **Crop Group 22**. Crop Group 22 has the same representative crop as the original Crop Subgroup 4B (*i.e.* celery), as well as an additional representative commodity, asparagus.

However, it was determined that several commodities in Crop Groups 4 and 5 were better represented by a different commodity or commodities. As such:

- Swiss chard (previously in Crop Subgroup 4B and represented by celery) was moved to Crop Subgroup 4-13A (represented by lettuce and spinach).
- Arugula, garden cress, and upland cress (previously in Crop Subgroup 4A and represented by lettuce and spinach) and Chinese broccoli (previously in Crop Subgroup 5A and represented by cabbage, broccoli or cauliflower) were moved to Crop Subgroup 4-13B (represented by mustard greens).
- Celtuce and Florence fennel (previously in Crop Subgroup 4B and represented by celery) and kohlrabi (previously in Crop Subgroup 5A and represented by cabbage, broccoli or cauliflower) were moved to Crop Subgroup 22A (represented by asparagus).

Refer to **Appendix I** for a schematic representation of these changes.

Although the representative commodities of Crop Groups 4 and 5 have changed as a result of the revisions to these crop groups, these changes do not imply that previously established MRLs on these commodities will underestimate residues. Rather, it was determined that these changes represent an updated "best fit" for crop group members and representative crops based upon review of the best available science.

4.0 Implications on Established MRLs and Implementation of Crop Group Conversions

When considering updating labels with existing uses on Crop Groups 4 or 5 to the revised crop groups, while maintaining the same registered use pattern, Registrants must specifically request that existing uses on individual commodities [*i.e.* that now belong to a different crop group and/or are represented by a different representative commodity (ies)] be maintained on the label. These commodities would then be accounted for on the revised label reflecting the revised crop groups. For example:

- If a request is made to update an existing label use on Crop Group 4, the updated label would be revised to Crop Subgroup 4-13A and Crop Subgroup 22B. As celtuce and Florence fennel, commodities that were previously in Crop Group 4, are now in Crop Subgroup 22A, they would no longer be a labelled use under Crop Subgroup 4-13A or 22B. The Registrant would need to ask that these two commodity uses be maintained and be listed individually on the label. It is noted that the same MRLs that were previously established in/on these commodities would apply after the revision.
- If a request is made to update an existing label use on Crop Group 5, the updated label would be revised to Crop Group 5-13 and Crop Subgroup 4-13B. As kohlrabi, a commodity previously in Crop Group 5, is now in Crop Subgroup 22A, it would not be a labelled use under Crop Group 5-13 or Crop Subgroup 4-13B. The Registrant would need to ask that the labelled use for kohlrabi be maintained. As such it would be listed individually on the label. The same MRLs that were previously established in/on these commodities would apply after the revision.

For requested uses on Crop Subgroup 22A, a crop subgroup MRL could be considered provided that the use pattern for the representative crop (asparagus) is similar to the use pattern for the other crops within the subgroup. In cases where MRLs were previously established for asparagus, as well as on commodities that have moved to Crop Subgroup 22A (*i.e.* kohlrabi, celtuce, and/or Florence fennel), the same would apply. If kohlrabi, celtuce, and Florence fennel shared the same/similar use pattern as asparagus, the MRL determined for asparagus could be extended to these crops. However if kohlrabi, celtuce, and Florence fennel have different use patterns than asparagus, these crops would maintain their individual MRLs.

5.0 Questions

Questions concerning this information note should be directed to the Health Canada Pest Management Information Serve

Appendix I Revisions to Crop Groups 4 and 5 as Part of DIR2014-02

Commodities in RED represent commodities that have been moved to a new crop group and are now represented by a different representative commodity. Commodities crossed out were removed as a result of the revisions made to Crop Groups 4 and 5 as they represent alternative common names to crops that are already members of these revised groups (for example, Mustard Spinach is another common name for Mustard Greens).

Crop Subgroup 4A. Leafy Greens
Representative Commodities: Head Lettuce, Leaf Lettuce, Spinach

- Amaranth
- Arugula (to 4-13B)
- Chervil
- ~~Chrysanthemum, Edible leaved~~
- Chrysanthemum, Garland
- Corn Salad
- Cress, Garden (to 4-13B)
- Cress, Upland (to 4-13B)
- Dandelion
- Dock (Sorrel)
- Endive (Escarole)
- Lettuce (Head and Leaf)
- Orach
- Parsley
- Purslane, Garden
- Purslane, Winter
- Radicchio (Red chicory)
- Spinach
- Spinach, New Zealand
- ~~Spinach, Vine~~

Crop Subgroup 4B. Leaf Petioles
Representative Commodity: Celery

- Cardoon (to 22B)
- Celery (to 22B)
- Celery, Chinese (to 22B)
- Celtuce (to 22A)
- Fennel, Florence (to 22A)
- Rhubarb (to 22B)
- Swiss Chard (to 4-13A)

Crop Subgroup 5A. Head and Stem *Brassica*
Representative Commodities: Cabbage, Broccoli or Cauliflower

- Broccoli
- Broccoli, Chinese (to 4-13B)
- Brussels Sprouts
- Cabbage
- Cabbage, Chinese (Napa)
- ~~Cabbage, Chinese Mustard~~
- Cauliflower
- ~~Cavolo broccolo~~
- Kohlrabi (to 22A)

Crop Subgroup 5B. Leafy *Brassica* Greens
Representative Commodity: Mustard Greens

- Broccoli Raab
- Cabbage, Chinese (bok choy)
- Collards
- Kale
- Mizuna
- Mustard Greens
- ~~Mustard Spinach~~
- Rape Greens

arugula, upland cress, garden

Swiss chard

Chinese broccoli

celtuce, Florence fennel

kohlrabi

Crop Subgroup 4-13A. Leafy Greens
Representative Commodities: Head Lettuce, Leaf Lettuce, Spinach

Amaranth, Chinese; Amaranth, leafy; Aster, Indian; Blackjack; Cat's Whiskers; Cham-chwi; Cham-na-mul; Chervil, fresh leaves; Chipilin; Chrysanthemum, garland; Cilantro, fresh leaves; Corn salad; Cosmos; Dandelion; Dang-gwi; Dillweed, fresh leaves; Dock; Dol-nam-mul; Ebolo; Endive; Escarole; Famefower; Feather cockscomb; Good King Henry; Huazontle; Jute leaves; Lettuce, bitter; Lettuce (head and leaf); Orach; Parsley, fresh leaves; Plantain buckhorn; Primrose, English; Purslane, garden; Purslane, winter; Radicchio (Red Chicory); Spinach; Spinach, Malabar; Spinach, New Zealand; Spinach, tree; Swiss Chard; Tanier Spinach; Violet, Chinese

Crop Subgroup 4-13B. *Brassica* Leafy Greens
Representative Commodity: Mustard Greens

Arugula; Broccoli raab; Broccoli, Chinese; Cabbage, Abyssinian; Cabbage, seakale; Chinese cabbage, bok choy; Collards; Cress, garden; Cress, upland; Hanover salad; Kale; Maca; Mizuna; Mustard greens; Radish, leaves; Rape greens; Rocket, wild; Shepherd's purse; Turnip greens; Watercress

Crop Subgroup 5-13. *Brassica* Head and Stem Vegetables
Representative Commodities: Cabbage, Broccoli or Cauliflower

Broccoli
Cabbage
Brussels sprouts

Crop Subgroup 22A. Stalk and Stem Vegetables
Representative Commodity: Asparagus

Agave; Aloe Vera, Asparagus; Bamboo, shoots; Celtuce; Fennel, Florence, fresh leaves and stalk; Fernm edible; Kale, sea; Kohlrabi; Palm hearts; Prickly pear; Prickly pear, Texas

Crop Subgroup 22B. Leaf Petioles Vegetables
Representative Commodity: Celery

Cardoon; Celery; Celery, Chinese; Fuki; Rhubarb; Udo; Zuiki